



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,147	09/29/2000	Yoji Serizawa	862.C2021	2811

5514 7590 05/19/2005

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

RAHIMI, IRAJ A

ART UNIT	PAPER NUMBER
----------	--------------

2622

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,147

Applicant(s)

SERIZAWA, YOJI

Examiner

(Iraq) Alan Rahimi

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-15,17-25 and 27-43 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5,7-15,17-25 and 27-43 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on 29 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


Twyler Lamb
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. In papers filed on December 3, 2004 applicant amended claims 1, 4, 5, 7-11, and 19-25; canceled claims 6, 16, 26; and added new claims 27-43. In a supplemental amendment dated February 9, 2005, applicant revised the specification. Changes to the specification were not considered to be new matter and were for purpose of correcting the language.

Response to Arguments

2. Applicant's arguments filed December 3, 2004 have been fully considered but they are not persuasive. Applicant argues that Hillmann does not disclose a mechanism for recording the setting of inhibition/permission of writing into the memory. Examiner disagrees based on the applicant's disclosure in the specification as how the setting of inhibition/permission is performed which is what Hillmann also teaches.

Examiner's understanding of the inhibition/permission setting is derived from the page 16 of specification. Page 16 states "...when the cartridge attached the printer main body, the printer engine accesses the nonvolatile memory 21 at given cycles by the aforementioned toner remaining amount detection means, and writes remaining amount data in an area of address No. 5 indicating the toner remaining amount the cartridge. At this time, when the toner remaining amount has not reached a predetermined toner remaining amount level at which the service life of the toner cartridge is checked, no memory lock setup is made at address No. 8, and the toner remaining amount level that changes based on the print amount the printer is rewritten by

Art Unit: 2622

overwriting the contents at address No. 5 at a predetermined timing, so that the latest amount data can always be stored.

When it is determined that the toner remaining amount has become equal to or lower than the predetermined, data indicating that the toner cartridge service life has expired is set at address No. 6, and a memory lock setup is made at address at address No. 8, thus inhibiting the contents of all the addresses from being rewritten.”

Hillmann also discloses the same in paragraph 6, lines 4-60 by stating that ink consumption is tracked based on the counter reading from the filled condition. When the counter reading reaches a counter reading corresponding to an end of supply it inhibits printing. Since the electronic memories are such that renewed programming is not possible, rewriting to the memory is prohibited.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 38 is rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Examiner's understanding of the claim in reference to the second and third memory area is in Fig. 4. This Figure indicates addresses 7 and 8 corresponding to two mutually exclusive Lock Set Ups for addresses 1-4 and 5-8 respectively. Therefore one address is not dependent on the other address as claim suggests.

Art Unit: 2622

5. Claims 38 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim is indefinite as to ...data determining inhibition/permission of (what?) with respect to said second memory area.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 4-5, 7, 9-12, 14-15, 17, 19-22 and 24-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Hillmann et al. (US patent 5,995,774).

Regarding claim 1, Hillmann discloses a printing apparatus (Fig. 1) to which an expendable 11 having a memory 14 for storing and holding information that pertains to a use state, and a recording agent used in a print process is detachably attached (Fig. 2), comprising:

memory access means 16 for making read and write to the memory in the expendable;
and

setting 16 means for setting inhibition/permission of data write with respect to an address space in the memory (column 6, lines 36-54).

Regarding claim 2, Hillmann discloses the apparatus according to claim 1, wherein said memory access means and the memory are connected via a serial communication line (column 5, lines 3-9 and Fig. 1).

Regarding claim 4, Hillmann discloses the apparatus according to claim 1, further comprising:

detection means for detecting an amount of an expendable agent in the expendable (column 4, lines 12-15); and

expendable agent update means for writing the expendable agent amount detected by said detection means at a predetermined address position of the memory via said memory access means (column 6, lines 9-25), and

wherein said setting means sets to inhibit write to the predetermined address position when said detection means detects that the remaining amount of the expendable agent becomes not more than a predetermined amount (column 6, lines 33-54).

Regarding claim 5, Hillmann discloses the apparatus according to claim 1, wherein one or a plurality of predetermined amounts of the expendable agent are determined in advance, when each of the predetermined amounts has been reached, data indicating that the predetermined amount has been reached is written in an address area corresponding to that predetermined amount at a different timing, and write to the address area is set to be inhibited (column 6, lines 4-54).

Regarding claim 7, Hillmann discloses a printing apparatus comprising:
detaching/attaching means for detaching or attaching an expendable (column 5, lines 64-65)
having a memory 14 capable of setting a locking state for inhibiting data writing with respect to
at least a predetermined area in the memory (column 6, lines 52-54);

detection means for detecting state of the expendable (column 4, lines 12-15)

write means for writing result detected by said detection means to the memory (column 6,
lines 4-32); and

locking state control means for controlling the locking state of the memory on the basis
of the result of said expendable detected by detection means (column 6, lines 36-54).

Regarding claim 9, Hillmann discloses the apparatus according to claim 7, wherein said
detection means detects an amount of an expendable agent in the expendable (column 4, lines
12-15).

Regarding claims 11 and 21 arguments analogous to those presented for claim 1, are
applicable.

Regarding claims 12 and 22 arguments analogous to those presented for claim 2, are
applicable.

Art Unit: 2622

Regarding claims 10, 14, 20 and 24 arguments analogous to those presented for claims 4, are applicable.

Regarding claims 15 and 25 arguments analogous to those presented for claim 5, are applicable.

Regarding claim 17, arguments analogous to those presented for claim 7, are applicable.

Regarding claim 19, arguments analogous to those presented for claim 9, are applicable.

Regarding claim 27, Hillmann discloses the apparatus according to claim 1, wherein said agent is toner and said expendable unit is a toner cartridge (column 7, lines 27-52).

Regarding claim 28, Hillmann discloses the apparatus according to claim 1, wherein the apparatus is an electrophotographic-type image forming apparatus (column 7, lines 27-52).

Regarding claims 29, 31, 33, and 35 arguments analogous to those presented for claim 27, are presented.

Regarding claims 30, 32, 34 and 36 arguments analogous to those presented for claim 28, are presented.

Art Unit: 2622

a first memory area (SP1-SP5) to store and hold information that concerns the expendable unit;

and

a second memory area (SP1-SP5) to store data for determining inhibition/permission of writing with respect to said first memory area (column 6, lines 4-35).

Regarding claim 38, Hillman discloses the memory unit according to claim 37, further comprising a third memory area to store data determining inhibition/permission of with respect to said second memory area (column 6, lines 4-35).

Regarding claim 39, Hillmann discloses the memory unit according to claim 37, wherein said second memory area is a specific address area or a specific bit area of the memory unit. It is inherent in Hillman that data is typically stored in specific address.

Regarding claim 40, Hillman discloses the memory unit according to claim 38, wherein said third memory area is a specific address area of the memory unit. It is inherent in Hillman that data is typically stored in specific address.

Regarding claim 41, Hillmann discloses the memory unit according to claim 37, wherein said expendable unit has an expendable agent used in a print process, and the information concerning the expendable unit is information related to a remaining amount of the expendable agent (column 6, lines 4-25).

Regarding claim 42, Hillman discloses the memory unit according to claim 37, wherein the information concerning the expendable unit is information concerning whether or not the expendable unit is new (column 6, lines 4-25).

Regarding claim 43, Hillmann discloses the memory unit according to claim 37, wherein the information concerning the expendable unit is date information concerning when the expendable unit has been attached to the printing apparatus for the first time (column 5, lines 44-68).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 8, 13, 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hillmann (US patent 5,995,774) in view of Purcell (International Publication Number WO 98/52762).

Regarding claim 3, Hillmann does not disclose the apparatus according to claim 1, wherein said memory access means and the memory are connected via non-contact communication means.

Art Unit: 2622

Purcell discloses on page 1, lines 34-37 and page 2, lines 1-8 the memory element in the paper roll of media communicates with the printer electronics using Radio Frequency (RF).

Hillmann and Purcell are combinable because they are from the same filed of endeavor that is printers having detachable expendable with memory.

At the time of invention it would have been obvious to a person skilled in the art, to use RF for communication between the memory and other parts of the printer.

The suggestion/motivation to do so would have been to reduce the reliability problems during the data transfer caused by mechanical contacts, vibration and movement of the expendable.

Therefore, it would have been obvious to combine Hillmann with Purcell to obtain the invention as specified in claim 3.

Regarding claims 8, 13, 18 and 23 arguments analogous to those presented for claim 3, are applicable.

Other Prior Art Cited

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stugers et al. (US patent 6,453,385) discloses partitioning of memory.

Matsumoto et al. (US patent application 2004/0233245) discloses ink cartridge having memory.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Iraq) Alan Rahimi whose telephone number is 703-306-3473. The examiner can normally be reached on Mon.-Fri. 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles can be reached on 703-305-4712. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Art Unit: 2622

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3800.



Alan Rahimi
May 16, 2005



TWYLER LAMB
PRIMARY EXAMINER